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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,757	09/26/2003	Bernd Papenfuhs	BS/1-22981/A/PAP 1	2787

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CIBA SPECIALTY CHEMICALS CORPORATION  
PATENT DEPARTMENT  
540 WHITE PLAINS RD  
P O BOX 2005  
TARRYTOWN, NY 10591-9005

EXAMINER

REDDICK, MARIE L

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/670,757

Applicant(s)

PAPENFUHS, BERND

Examiner

Judy M. Reddick

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09/26/03;02/20/04;03/31/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/26/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 03/22/02. It is noted, however, that applicant has not filed a certified copy of the 10115222.1 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

2. The information disclosure statement filed 09/26/03 has been considered and scanned into the application file. The U.S. Patent Document No. 5,955,691 has been withdrawn and therefore not considered.

Claim Objections

3. Claims 4-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and/or cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-11 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.
5. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - A) The recited "high-molecular-weight" per claim 1 constitutes indefinite subject matter as per the metes and bounds of "high-molecular-weight" engender indeterminacy in scope. There are two separate requirements set forth in the § 112, second paragraph: (A) the claims must set forth the subject matter that applicants regard as their invention; and (B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant. See M.P.E.P. § 2171.
  - B) The recited "obtainable" per claim 1 constitutes indefinite subject matter as per it not being readily ascertainable as to if or how said objectionable term further limits the claims.
  - C) The recited "the crosslinking agent" per claim 2 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

- D) The recited "in particular" per claim 3 constitutes indefinite subject matter as per it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hann et al (U.S. 5,268,490) or Hann et al (U.S. 5,389,597).

Each of Hann et al'490 and Hann et al'597 teach compositions defined basically as containing a benzofuranone and a binder that includes polymeric materials such as polyvinyl butyral (the Abstract, cols. 1-3, col. 6, lines 54-68 & col. 7, lines 1-35). In particular, each of Hann et al'490 & Hann et al'597 exemplify ink formulations comprising a benzofuranone compound and polyvinyl butyral (col. 12, INKS 1-4). Each of Hann et al therefore anticipate the claimed invention. It would be expected that the polyvinyl butyral/benzofuranone combination of each of Hann et al'490 & Hann et al'597 would engender a high molecular weight, crosslinked product since the polyvinyl butyral/benzofuranone combination of Hann et al'490 & Hann et al'597 is essentially the same as and made in essentially the same manner as the claimed high-molecular weight, crosslinked polyvinyl butyral.

It has been held that where applicants claims a composition in terms of function, property of characteristic where said function is not explicitly shown by the reference and where the Examiner has explained why the function, property or characteristics is considered inherent in the prior art, it is appropriate for the Examiner to make a rejection under both the applicable sections of 35 USC 102 and 35 USC 103 such that the burden is placed upon applicant to provide clear

evidence that the respective compositions do, in fact, differ as provided for under the guise of *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al*, 205 USPQ 594.

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon applicant to provide clear and convincing factual evidence that the respective products do in fact differ in kind - *In re Brown*, 59 CCPA 1063, 173 USPQ 685 (1972); *In re Fessman*, 180 USPQ 324 (CCPA 1974) - and to come forward with evidence establishing unobvious differences between the claimed product and the prior art product. *In re Marosi* 218 USPQ 289.

While patentees may not recognize the "benzofuranone" as a crosslinking agent, the discovery of a new property or use for a previously known compound cannot impart patentability to claims to that compound, even if the property or use is unobvious from the prior art (*In re Shoenwald*, 22 USPQ 1671).

Even if it turns out that the Examiner has somehow missed the boat and the claims are not anticipated by the disclosures of each of *Hann et al*, it would have been obvious to the skilled artisan to extrapolate, from each of *Hann et al*, the precisely defined x-linked polyvinyl butyral, as claimed, as per such having been within the purview of the general disclosures of each of *Hann et al* and with a reasonable expectation of success.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 2 & 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hann et al (U.S. 5,268,490) or Hann et al (U.S. 5,389,597).

The disclosures of each of Hann et al'490 & Hann et al'597 are relied upon for all that is taught as stated in the Grounds of Rejection supra as applied to claim 1. Further, the interchangeability of one well-known benzofuranone compound for another is a matter of ordinary choice to the skilled artisan with a reasonable expectation of equivalent results, absent some evidence of unusual or unexpected results.

Claim Rejections - 35 USC § 103

12. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pastor et al (U.S. 5,512,621), Nesvadba et al (U.S. 5,516,920) or Meier et al (U.S. 5,852,090).

Pastor et al teach the use of phosphate compounds for stabilizing organic polymers such as polyvinyl butyral and compositions therefrom further including customary additives such as benzofuranones, sufficient to meet the benzofuranone per each of claims 1-3 (the Abstract, col. 1, lines 9-42, col. 3 line 1, col. 4, lines 49-54, col. 6, lines 27-39 & cols. 10-12).

Nesvadba et al teach the use of 3-arylbenzofuranones, sufficient to meet the benzofuranone per each of claims 1-3, for stabilizing organic materials that include polymers such as polyvinyl butyral and compositions therefrom further including other conventional additives (the Abstract, cols. 1-15, col. 26, lines 19-25).

Meier et al teach the use of norbornene-substituted bisphenol antioxidants for stabilizing organic material which include polymers such as polyvinyl butyral and compositions therefrom further including customary additives such as benzofuranones, sufficient to meet the benzofuranone per each of claims 1-3 (the Abstract, col. 1, lines 1-6, col. 2, lines 39-50, col. 4, lines 46-51, col. 6, lines 38-52 & col. 7, lines 12-20).

The disclosures of each of patentees differ basically from the claimed invention as per the non-express disclosure of an embodiment directed to the precisely defined polyvinyl butyral/benzofuranone combination, as claimed. However, one having ordinary skill in the art would have found it obvious to extrapolate, from each of patentees, the precisely defined polyvinyl butyral/benzofuranone combination, as claimed, as per such having been within the purview of the general disclosures of patentees and with a reasonable expectation of success.

It would be expected that the polyvinyl butyral/benzofuranone product, as modified supra, would possess the claimed properties such as "high-molecular-weight & crosslinked since it is essentially the same as the claimed polyvinyl butyral/benzofuranone product.

A prima facie case of obviousness (for a composition) does not require the solution of the same problem or recognition of the same advantages as the applicant's invention. In re Dillon 16 USPQ2nd 1897 (CAFC, en banc, 1990), which overrules In re Dillon 13 USPQ 2nd 1337 and In re Wright 6 USPQ 2nd 1959.

The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

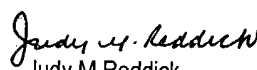
#### Conclusion

13. The additional prior art to Minami et al, listed on the attached PTO FORM 892, is cited as of interest in teaching a composition containing a random copolymer blended with another polymer such as polyvinyl butyral and further including conventional additives which include antioxidants such as benzofuranone compounds and considered merely cumulative to the prior art supra.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (571) 272-1110. The examiner can normally be reached on 6:00 a.m.-2:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Judy M Reddick  
Primary Examiner  
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JMR *JMR*  
12.8.2004